THE FOOD CHAIN

A **food chain** shows how each living thing gets its food. Some animals eat plants and some animals eat other animals. Each link in this chain is food for the next link. A food chain always starts with plant life and ends with an animal. Each species occupies a particular position known as a **trophic level**.

Link 1. Plants are called **producers** because they are able to use light energy from the sun to produce food (sugar) from carbon dioxide and water through **photosynthesis**.

Link 2. Animals cannot make their own food so they must eat plants and/or other animals. They are called **consumers**. There are three groups of consumers:

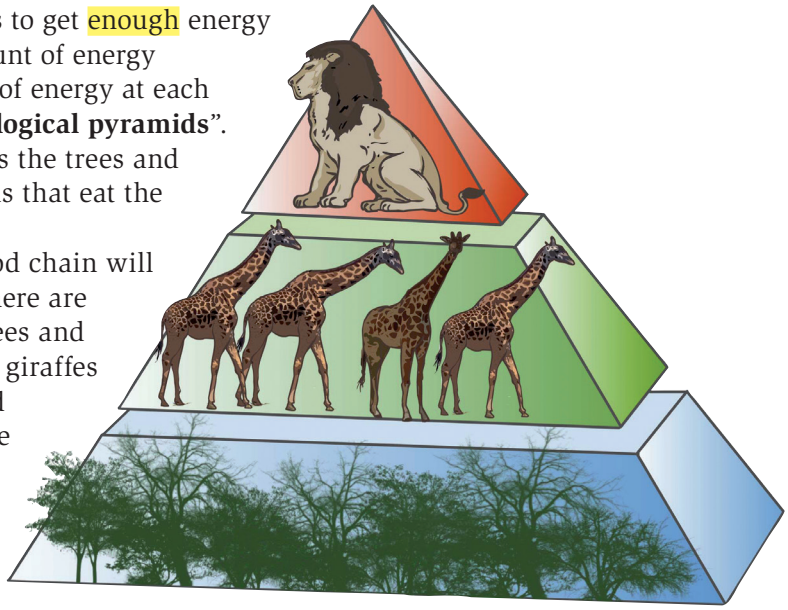
a. animals that eat only plants are called **herbivores** or **primary consumers**.
b. animals that eat other animals are called **carnivores** and are
- **secondary consumers (**carnivores that eat herbivores), or
- **tertiary consumers** (carnivores that eat other carnivores)

c. animals and people which eat both animals and plants are called **omnivores**.

Link 3. Then there are **decomposers** – bacteria and fungi – which feed on decaying matter. The decaying process releases mineral salts back into the food chain for absorption by plants as nutrients.

In a food chain, energy is passed from one link to another. When a herbivore eats, only a fraction of the energy that it gets from the plant food becomes new body mass. The rest of the energy is lost as waste or used by the herbivore to carry out its life processes, such as movement, digestion, reproduction and so on. Therefore, when a herbivore is eaten by a carnivore, it passes only a small amount of the total energy that it has received to the carnivore.

The carnivore then has to eat many herbivores to get enough energy to grow. In a food chain, at each link the amount of energy decreases more and more. Because of the loss of energy at each link, ecosystems develop what are called "**ecological pyramids**". For example, a simple ecological pyramid links the trees and shrubs, the giraffes that eat them, and the lions that eat the giraffes.



A change in the size of one population in a food chain will affect the other populations. For example, if there are too many giraffes, there will be insufficient trees and shrubs to eat, so many giraffes will die. Fewer giraffes also means less food for the lions, which could starve to death. But if there are fewer lions, the giraffe population will increase.

Most animals are part of more than one food chain and eat more than one kind of food in order to get energy. These form a **food web**.

both… and: *sia… che.*
carbon dioxide: *anidride carbonica.*
to carry out: *compiere.*
enough: *abbastanza.*
own: *proprio.*
shrubs: *arbusti.*

1 Match each word with its definition.

1. link	☐	**a.** microscopic organisms
2. chain	☐	**b.** network
3. waste	☐	**c.** animals that feed on plants
4. herbivores	☐	**d.** connection
5. decaying	☐	**e.** decomposing
6. bacteria	☐	**f.** series of connected things
7. web	☐	**g.** material to be thrown away

2 Put the words into the correct order to make questions.

1. food/a/does/show/what/chain .....?

2. and/food/a/where/chain/end/does/start .....?

3. producers/are/called/plants/why .....?

4. difference/is/herbivores/between/and/what/the/carnivores .....?

5. are/carnivores/what .....?

6. do/decomposers/on//what/feed .....?

7. pyramid/an/is/what/ecological .....?

8. chain/a/is/than/shorter/food/a/web/food .....?

3 Write down the answers to the previous questions.

1. .....

2. .....

3. .....

4. .....

5. .....

6. .....

7. .....

8. .....

4 Use the words to complete a marine food chain and draw the ecological pyramid.

1. krill **2.** killer whale **3.** squid **4.** seal **5.** plankton **6.** fish

5 Now think about a food chain or a food web on your own. Draw it in your exercise-book, then explain it to your schoolmates and your teacher.